



RESEARCH IS KEY!

The future of medical advancement depends on more than dollars and cents. By joining the Research Participant Registry at the University of Pittsburgh, you can play an important role in helping scientists make breakthrough discoveries that will impact patient care.

Contact your physician or 1-866-438-8230 for more information, or visit www.research-registry.pitt.edu. Your support makes all the difference.

INSIDE

Future of Head and Neck Cancer 2

On the Move 3

Thanking our 2008-2009 Supporters .. 4-5

Under Your Nose 6

Tribute to Excellence . 7

A VISION FOR THE BLIND

BY LAUREN WALLY

Blindness is a significant cause of human morbidity and has been shown to result in social isolation, increased risk of falling and resultant hip fractures, depression, family stress, and ultimately, a greater tendency toward disability or premature death (Ellwein, 1996). Accordingly, restoring visual function for the blind has tremendous consequences.

The past decade has brought technological advances that catapulted the idea of an ocular prosthetic from the realm of science fiction to the brink of reality. Over the last ten years, innovations in computer circuitry have allowed for significant progress in the development of ocular prosthetic devices. In varying ways these devices attempt to make the most of a patient's intact sensory pathways that mediate vision, but usually only fall into three categories: retinal implantation, sensory substitution or cortical stimulation (Winter, 2007). These machine-human interfaces promise to eventually restore some type of visual function in otherwise blind or near-blind individuals. However, the visual images which result in current iterations do not resemble "normal" vision. For example, images have a limited field of vision, no color or depth perception, and are heavily pixilated and crude. While such limited visual precepts do allow the blind to perform simple tasks like sorting objects or grating discrimination, more complex visual functionality is needed to make these devices useful in a real world setting comprised of intricate scenes.

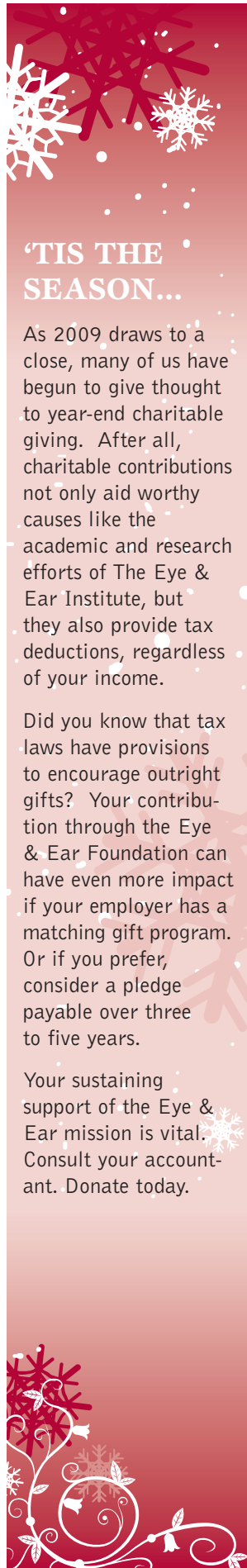
Along with the need for more sophisticated results, another hurdle in moving these devices from research labs to clinical practices is the lack of a framework to support their adoption by clinicians. The criteria for assessing functional outcomes are lacking—most of the devices are not yet FDA-approved; the strategies for rehabilitation training are not developed; and medical classification codes reimbursement costs have not yet been determined.



Dr. Amy Nau and a patient test revolutionary vision substitution technology BrainPort.

However, UPMC Eye Center is steadily addressing those barriers with the help of physician-scientists like Dr. Amy Nau, Director of Contact Lens and Low Vision Service. Dr. Nau is currently doing great work with The BrainPort™ Vision Device, a sensory substitution device produced by Wicab, Inc. that is intended to help users "see through the tongue." BrainPort improves orientation and mobility for patients who are blind or have very low vision by providing information about location, position, size, and shape of objects to the brain through electro tactile stimulation of the tongue. Imagine a pair of sunglasses with a camera that is attached to a Blackberry-sized transmitter that connects to a "lollipop" device. The lollipop is placed on the tongue and has sensors that emit the sensation of champagne bubbles. These sensors then carry signals from the camera to the brain. In the near future, Dr. Nau will begin studying another sensory substitution device that helps patients "see through sound." This device, called the vOICE™, uses the intact sense of hearing to create "soundscapes" that can be used to interpret an envi-

Continued on page 8



'TIS THE SEASON...

As 2009 draws to a close, many of us have begun to give thought to year-end charitable giving. After all, charitable contributions not only aid worthy causes like the academic and research efforts of The Eye & Ear Institute, but they also provide tax deductions, regardless of your income.

Did you know that tax laws have provisions to encourage outright gifts? Your contribution through the Eye & Ear Foundation can have even more impact if your employer has a matching gift program. Or if you prefer, consider a pledge payable over three to five years.

Your sustaining support of the Eye & Ear mission is vital. Consult your accountant. Donate today.



THE FUTURE OF HEAD AND NECK CANCER

BY JENNIFER R. GRANDIS, MD

At the Eye & Ear Institute, the members of the head and neck program in the Department of Otolaryngology work closely together to care for head and neck cancer patients. Physicians and scientists meet several times a week to discuss ongoing research projects and plan future investigations. The goal of these studies is to improve the quality of life for the patient with head and neck cancer and to develop new and improved ways to prevent, diagnose and treat this cancer. Frequent interactions between physicians and scientists ensure that questions being addressed in laboratories will ultimately result in answers for patients suffering from head and neck cancer. Under the mentorship of Vice Chair for Research Dr. Jennifer Grandis, there are a number of physician-scientists who are currently leading clinical trials with great promise.

Dr. Uma Duvvuri is the newest member of this expert team and he is leading a study to understand the effects of two new cancer drugs which target proteins thought to be important in the development of head and neck cancer. The first, erlotinib (Tarceva™) blocks the epidermal growth factor receptor and the other, dasatinib (Sprycel™) inhibits Src family kinases. Both medications have helped control the growth of cancers in the laboratory setting so Dr. Duvvuri's team is working to see if combining these agents that target individual growth pathways is more effective for head and neck cancer patients than each treatment alone.

Dr. Seungwon Kim's lab is studying an antibody, cetuximab (Erbix™), which targets the epidermal growth factor receptor. Cetuximab is approved for use in patients with head and neck cancer but has only been helpful for some. Accordingly, Dr. Kim is investigating the potential benefits of adding the antibody bevacizumab

(Avastin™), which targets the vascular endothelial growth factor. Routinely used to treat other cancers, Avastin blocks the formation of new blood vessels and could prove valuable by blocking cancer-related proteins in tumors.

In addition to studies designed to control cancer growth, the Chief of the Division of Head and Neck Surgery, Dr. Robert Ferris, is working on a head and neck cancer vaccine. His lab is studying how the immune system may identify patients most likely to benefit from treatment medications such as cetuximab, and how this in turn may be used to create a vaccine which may prevent head and neck cancer.

Finally, Dr. Grandis' lab is coordinating a new model of testing agents for cancer treatment. Unfortunately, it often takes a long time for new drugs to become available for cancer patients. The Grandis lab's new approach will enable the Eye & Ear Institute team of physician-scientists to provide these promising new agents to patients much sooner.

One promising study to come from these relationships suggests that doctors may be able to use a blood test to determine an individual's risk of developing cancer and to predict which treatment is most likely to be effective. Not only do these collaborative efforts nurture the research of promising physician-scientists, but they ultimately have the potential to develop improved and more effective strategies with fewer side effects for the treatment and one day, prevention of head and neck cancer.

For more about the head and neck cancer program, contact 412-647-2100. To make a gift to support these research efforts, call 412-383-8756, or give online today at www.eyeandear.org.

ON THE MOVE

BY LAUREN WALLY & LORI ANN YOUNG

Q ■ **What happens when you combine medical students with an interest in ophthalmology and a man with a “vision” of his own and the knowledge to implement it?**

A: *The Guerilla Eye Service, a mobile clinic staffed by volunteers providing free, comprehensive eye care to those in need since 2006.*

The Guerilla Eye Service (GES) began when those students approached the Director of the Ophthalmology Residency and Medical Education Programs, Evan (Jake) Waxman, MD, PhD and asked to start a local chapter of one of the national vision screening organizations. Jake believes screening events have their place and raise community awareness of eye disease. They can identify patients at risk of losing vision. So why GES? Because Jake felt they could do more. “In my experience,” he says, “many patients who attend these screening are outside the targeted risk group. In many cases, patients who have established ophthalmic care come to the screenings for an inappropriate ‘second opinion.’ Additionally, I was concerned that patients walk away from the screening overly reassured that they have had a ‘real eye exam.’ Most importantly, many people who are identified as ‘at risk’ receive no follow-up and may forget to or be unable to seek care.”

Under Dr. Waxman, the GES takes a different approach to eye care. “We focus on recognizing barriers to ophthalmic care and overcoming them,” he says. “Barriers can be financial, transportation and mobility related, geographic, or related to attitudes and awareness.”

With grants from local foundations, portable equipment was purchased that would provide complete eye exams. The first location to benefit from the model was Verland, a facility for individuals suffering from mental disabilities. These patients need stability and a sense of familiarity. Taking them away from their familiar environment and bringing them to a busy office is not always in their best interest. Additional sites have since been added—Birmingham Free Health Clinic, Squirrel Hill Health Center, Ninth Street Free Clinic in McKeesport and Catholic Charities Free Health Care Center all provide care to the underserved population of Pittsburgh and surrounding counties. Additionally, the GES makes twice yearly visits to Cornerstone Care in Greensboro and Waynesburg, PA.

Staffed by residents, medical students, and UPMC Eye Center staff, the Guerilla Eye Service brings treatment directly to those in need. Dr. Waxman states that “with our current equipment, crew, and methods we have identified and treated numerous patients who would have lost vision otherwise.” And there are those in Pittsburgh who are extremely thankful.

To support the GES, contact 412-383-8756. Or give online at www.eyeandear.org.

The Guerilla Eye Service provides quality eye care for many at-risk individuals around Pittsburgh.

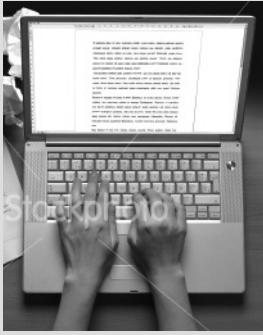


HUBERTA S. AND JOHN V. SICILIANO FAMILY FUND FOR CANCER RESEARCH

The Department of Otolaryngology at The Eye & Ear Institute held its annual Siciliano Lecture on Monday, October 26th, with David Eisele, MD, Professor and Chairman of Otolaryngology at the University of California-San Francisco delivering his lecture, “Parapharyngeal Space Neoplasms: New Perspectives”.

The Siciliano Lecture series is made possible by the Siciliano Fund for Cancer Research, established in honor of John Vincent Siciliano, a resident of Steubenville, OH who succumbed to cancer in 2003. The fund is also used to help young physician scientists begin to establish themselves in laboratory research. These important efforts will one day help to change outcomes in the management of head and neck cancers.

2008-2009 SUPPORTERS OF THE EYE & EAR



TELL US YOUR STORY

Generosity can come in many forms — philanthropic support of the programs of The Eye & Ear Institute, participation in medical research, or sharing experiences of care at UPMC Eye Center or University Ear, Nose & Throat Specialists. How has Eye & Ear made a difference in your life? We'd love to learn more about your patient story.

Help us educate those who may not understand the seriousness of diseases and disorders of the eye, ear, nose and throat. Encourage those struggling with similar medical conditions. Inspire those who would like to support research, education or care programs with a charitable gift.

Share your story today at our secure Website, www.eyearandear.org.

The Eye & Ear Foundation gratefully recognizes the support of individuals, businesses and foundations committed to bringing new science and new solutions to people with diseases and disorders of the eye, ear, nose, throat head and neck. Thank you for your partnership in this mission through philanthropy.

\$25,000+

Myrtle Forsha Memorial Trust
Dr. and Mrs. V.K. Raju

\$5,000 - \$9,999

Dr. and Mrs. Jonas Johnson

\$1,000 - \$4,999

Donald and Sylvia Robinson
John and Cathy Pelusi
Albert and Nancy Muse
Francis and Madeline Shane Fund of The Pittsburgh Foundation
Jane and Donald Cookson
Mr. and Mrs. Bruce Wiegand
David Eibling, MD
Charles Brodbeck, Esq.
Robert L. Ferris, MD, PhD
Edmond Watters, MD
Mr. and Mrs. B. Gordon Nelson III
David Pollock, MD
Dr. and Mrs. Joel Schuman
Mr. and Mrs. John T. Galey Jr.
Dr. and Mrs. Lawrence Ellis
Lawrence and Ina Gumberg Foundation
Lily Im, MD
Marian Auld
Richard Bowers and Miriam Rader
William* and Nancy McDonald
William and Marguerite Woodworth Seefeld
Mr. and Mrs. Zola Gold
1 Anonymous Gift

\$500 - \$999

Dr. and Mrs. Joseph F. Novak
Daniel Goetz
Douglas Dick
Eric Falk
Ethel Kurtz
James Waldron
James Johnson
Mary Louise Gantz
Michael Tragakis, MD
Mick Meser
Perry and BeeJee Morrison
Rodney Piatt
Seung-Kyu Chung, PhD

Tapan Shah, MD
1 Anonymous Gift

\$250 - \$499

Daniel McLain
Jim and Kay Latorre
Margaret McKenzie
Rick and Mona Beaudet
Mr. and Mrs. David Lyons
Eileen and Lt. Col. Jeffrey C. Paul
Armand and Carole Lombardo
August Moret
Benny Ray and Donna Toothman
Charles and Ann Catlett
Gretchen Elkus
Heberto Proveda
John R. Walter
Joseph Toth
Judith Berger
Lawrence Filiaggi
Lawrence Bagley, DVM
Michael Perry
Dr. and Mrs. Michael Specia
Phyllis Grine
Harbaksh and Sharon Sidhu
3 Anonymous Gifts

\$100 - \$249

St. Louise Moms
Antonio and Susan Godinez
Frank Dettore
James Mondzelewski, MD
Jan and Doreen Duchoslav
John Sheppard Jr., MD
Karen Larson
Deva and Michele Chari
Paul Kinchington, PhD
Mr. and Mrs. William S. McConnor
James Reese
Kenneth Isaacson
Kerri, Freddy, Brooke and Brandon Nagle
Richard and Martha Masson
W.R. and Elizabeth Hoag
Estate of Virginia Huban
CARS Protection Plus Inc.
Joseph F. Bippus Jr.
Cookson, Peirce & Co., Inc.
Shadyside Squirrel Hill Lions Club
DBF
Dr. Adam Lesko
Aimee Garay-Molly
Andrew Petcash
Andrew W. Eller, MD
Ann Haldeman
Ann and Richard MacDonald
James and Anne Shultz
Anne Pascasio

AR FOUNDATION: JULY 2008 - JUNE 2009

Anthony Aubrecht
Antonietta Mauro
Arthur Kerr Jr.
Barbara DePasquale
Barbara Mikulich
Barry Lhormer
Benjamin Varinoski
Bernard and Evelyn Kobosky
Bernard and Stephanie Mallinger
Beth Hopen, PhD
Bharatha Devabhakthuni
Keith and Brenda Vail
C. Dan Siapco, MD
Carol Pollock
Charles and Karen Downs
Christine Youngblood
Daniel Vuic
David Clark
David K. Watson
Dolores Vesio
Dolores DiTullio
Edgar Levenson
Edward and Evelyn Molchan
Dr. Elizabeth Baranger
Emory J. Mahan
Eric Meyer, MD
Dr. and Mrs. Francis David
Frank Genovese, MD
Dr. and Mrs. George Coar
George Pavlic
George Fisher
Gina Snyder
Gloria Cole
Gloria Mackey
Pat and Goldie Stromick
Gordon Higgins
Greg Ludvik
Guy and Betty Gamble
Mr. and Mrs. Harvey Childs Jr.
Henning Anderson
Herman Snyder
Irving and Aaronel Gruber
J. Leo Chirdon
James and Kathleen Braham
James and Ruby Doverspike
James and Alice Ternent
James and Sarah Bregenser
Jeanne Fulton
Joanne Ross Wilder
John and Julie Monocello
John Pella
Mr. and Mrs. John Bertoty
Joseph Twargoski
Joseph and Frances M. Kemper
Joyce Gordon
Judith Schell
Karl and Brenda Sill
Kenneth and Arlene Popko
Kenneth Martchek

Larry Dickerson
Mr. and Ms. Lawrence J. Rambish
Leslie Mlakar
Linda Burke
Lois Weaver
Lois Doran
Madeline Seibert
Mary Wingard
Mary Anne Brenkus
Mary Ellen Meyer
Mary Ellen Goga
Merle and Teresa Garman
Merrickay Fausti
Nancy Jones
Nelson and Betty Gundy
Patricia Quinn
Raed Abdullah, MD
Ralph Tarter
Randolph Mallick
Raymond J. McCabe
Mr. and Mrs. Robert Reichenbach
Robert and Paula Bowersox
Robert Salomone
Robert Susa Jr.
Roland and Michelle Campanelli
Ronald Evans
Ronald McKeever
Roni Magalotti
Rose Mary Surgent
Rosita Go
Sara Sleppy
Sean and Krista Batterson
Mr. and Mrs. Seward Prosser Mellon
Stefi Kirschner
Suman Golla, MD
Susan Koehler
Susan Kozminski
Thelma Meacci
Mr. and Mrs. Theodore Storoz
Thomas Strayer, MD
Thomas Burns Jr.
Tom and Clara Gould
Vijaya Guntumadugu
Virginia Schindler
Warren Bloch
Warren and Ellen Hulnick
Wayne Gerhold
William and Margaret Albanese
William Gooding
William Murphy and Barbara Byers
6 Anonymous Gifts

* deceased

THE *Year* IN REVIEW

The 2008-2009 fiscal year was one of change and growth. Here are just a few highlights:

- The Department of Ophthalmology at The Eye & Ear Institute received high praise from national experts
- Eight Eye & Ear physicians were honored by *Pittsburgh Magazine* as top doctors for expert care and innovative research
- The Louis J. Fox Center for Vision Restoration was established — gifts from supporters nationwide, matched 1:1 by UPMC, continue to grow this exciting program
- The Eye & Ear Foundation introduced its newsletter, *Sight + Sound*
- The Foundation launched its updated Website, www.eyear.org, aimed at informing visitors and making it easier than ever to support the Foundation

UNDER YOUR NOSE

BY B.J. FERGUSON, MD

The longer I live and the more I see of disease, the more I appreciate the value of quality of life over quantity. It is often simple pleasures—the things right under our noses—which make life enjoyable. Allergies and sinusitis are seldom life-threatening; however, they are common, often co-existing disorders which sap energy, impair sleep, preclude clear-headed thinking, and prevent the enjoyment of simple things like a picnic outside on a rare sunny summer day in Pittsburgh.



I lead the team of physicians and researchers at the Division of Sino-nasal Disorders and Allergy of The Eye & Ear Institute, and we are dedicated to providing the most comprehensive care and management of allergies and rhinosinusitis. With our main office at UPMC Mercy, as well as satellite offices at St. Margaret, Shadyside, Wexford and Indiana, we are on the forefront of allergy research. Sublingual drops and tablets, traditional allergy shots, education in avoidance and targeted medical therapy are all part of our program to care for patients

who suffer from sinus disorders and allergies.

In our experience, clinical care and research go hand-in-hand. Sometimes a very important observation has been right under our noses; it's just been hidden or we are still learning how to look for it. For example, two years ago, a patient had an infected cheek (maxillary) sinusitis which persisted for three years despite five surgeries and oral and IV antibiotics. A sinus CT scan finally revealed an overlooked periapical abscess of her tooth and once the infected tooth was pulled, the patient had complete resolution. Our team went on to discover that up to 20% of dental abscesses may be missed by routine dental screening and only become apparent upon trained evaluation of a sinus CT scan. In fact, up to 75% of severe maxillary sinus infections are associated with dental infection and surgery doesn't cure the sinuses unless the infected tooth is also addressed.

Up to 75% of severe maxillary sinus infections are associated with dental infection...

Research like this is our legacy to the future. Why do previously healthy, middle-aged adults lose their sense of smell, contract asthma, or develop nasal polyps (which hang down into the nose from the sinus outflow tracts like small grapes)? Many of these patients have intriguing immune deficiencies and are frequently infected with a particular bacteria that causes inflammation. There are so many unanswered questions and as yet, so few targeted and successful therapies in this group of patients.

One area of our focus is rhinosinusitis, a heterogeneous disorder associated with a variety of things, from nasal polyps to infectious bacteria and fungi, and we are at the forefront of categorizing chronic rhinosinusitis based on these associations and types of inflammatory cells present. From this we can draw generalizations about categories of rhinosinusitis, which can assist us in targeting medical therapy. Our division was among the first to demonstrate bacterial biofilms in chronic sinusitis through electron micrographic imaging performed with the assistance of the University of Pittsburgh's Center for Biologic Imaging. Bacterial biofilms are particularly stubborn infections in which symptoms may improve while the patient is on antibiotics, but the infection itself is not really eradicated so it returns when antibiotics are withdrawn. Surgery that is successful in many of our other patients is frequently ineffectual in patients with biofilms. Topical culture-directed antibiotics and prolonged antibiotics following surgery appear to be helping in some of these patients, but further study and new tools are needed.

To date, there is no single medication that has an FDA indication for chronic rhinosinusitis but our Division of Sino-nasal Disorders and Allergy continues to investigate underlying causes of disease and to improve care as we work toward a cure. We hope that with continued directed research, the time will come when the most stubborn diseases have solutions as simple as correcting an infected tooth and our patients can be restored to a better quality of life.

Support this research with a contribution today. Call 412-383-8756 or visit www.eyeandear.org.



Albert Muse, Dr. Gregory Wolf, Gordon Nelson and Dr. Jonas Johnson at the 2009 Muse Prize Dinner



SHARE THE GIFT OF HEARING

Don't throw out your old or unwanted hearing aids! Recycling your used hearing aids is a great way to make a tax deductible gift through the Eye & Ear Foundation that will directly impact the quality of life for an adult or child suffering hearing loss or impairment. Any make or model, regardless of age, can be donated to the Hearing Aid Recycling Program. Your gift really can make a difference.

To participate, please securely package the hearing aid along with your name, address and telephone number and mail to:

The Eye & Ear Foundation
Hearing Aid Recycling Program
203 Lothrop Street,
S119 BST
Pittsburgh, PA 15213

A TRIBUTE TO EXCELLENCE

BY JACQUELIN WALKER

On September 17, 2009, supporters of the Eye & Ear Foundation and clinical and research leaders of the Department of Otolaryngology at The Eye & Ear Institute gathered together for the annual Albert C. Muse Prize celebration. This year's honor went to a visionary researcher, professor and leader-Gregory T. Wolf, MD.

Dr. Wolf is renowned for many accomplishments, including his organization of the first International Workshop in the Biology and Treatment of Head and Neck Cancer (which would eventually form the First International Conference on Head and Neck Cancer), serving as the first director of the head and neck oncology program at the University of Michigan, and later serving as Chairman of its Department of Otolaryngology.

Dr. Wolf has left a tremendous mark on the head and neck cancer field through groundbreaking research as well, especially as lead investigator in clinical trials for the National Veteran's Affairs Cooperative Study for organ preservation. Here he demonstrated that by administering traditional chemotherapy along with radiation therapy to advanced laryngeal cancer patients, treatment could prove just as effective as surgery but preserve patients' organs in the process. These findings were subsequently established as standard of care worldwide, improving patients' quality of care as well as quality of life during treatment. Dr. Wolf has committed a career spanning more than 25 years to bringing medical oncologists,

radiation oncologists, radiologists, pathologists and scientists together in research that will enhance the future of head and neck cancer patient care.

The Eye & Ear Foundation created the Albert C. Muse Prize to honor such vision, dedication and achievement in ophthalmology and otolaryngology. Since its inception in 2001, the Muse Prize has been awarded to distinguished physicians and scientists worldwide for their excellence in study and clinical care: Wolfgang Steiner, MD; Judah Folkman, MD; James F. Battey Jr., MD, PhD; Daniel M. Albert, MD; and Philip J. Rosenfeld, MD, PhD. And while the award honors medical excellence, it also honors its namesake, Albert C. Muse, former chair of the Foundation and current vice-chair.

For more than thirty years, Mr. Muse has served and philanthropically supported the research and care goals of the Eye & Ear Hospital, Institute and Foundation.

Currently, Dr. Wolf serves the University of Michigan as Chair Emeritus of the Department of Otolaryngology, as well as Professor and Director of Specialized Program of Research Excellence (S.P.O.R.E.) Head and Neck Cancer at the University.

To inquire about giving to the Albert C. Muse Prize or joining us for the 2010 Muse Prize in Ophthalmology, contact 412-383-8756 or info@eyeandear.org. Or visit eyeandear.org.

www.eyeandear.org

THE **Eye**
& **Ear**
Foundation
of PITTSBURGH

203 Lothrop Street , S119 BST
Pittsburgh, PA 15213
(412) 383-8756
(412) 383-8769 *fax*

Prstd Std
U.S. Postage
PAID
Permit No. 5673
Pittsburgh, PA

UPMC EYE CENTER
412.647.2200

**UNIVERSITY EAR, NOSE &
THROAT SPECIALISTS OF UPMC**
412.647.2100

IF YOU NO LONGER WISH TO RECEIVE
OUR NEWSLETTER, PLEASE CONTACT
412-383-8749 OR INFO@EYEANDEAR.ORG.

The official registration and financial information
of the Eye & Ear Foundation may be obtained
from the Pennsylvania Department of State
by calling toll free, within Pennsylvania,
1 (800) 732-0999. Registration does not
imply endorsement.

DONATE ONLINE!

To ensure new science
and new solutions,
private support is more
important than ever.
Our secure Website,
www.eyeandear.org,
makes giving easy and
safe. Support Ophthal-
mology or Otolaryngology
in general or specific
purposes like the Albert
C. Muse Prize or Fox
Center for Vision
Restoration. Or purpose
your unrestricted gift to
be used wherever it is
needed most. **Give
online today.**

Vision continued from page 1

ronment. She is also collaborating with the
Robotics Institute at Carnegie Mellon
University in an effort to integrate existing
machine vision technology into artificial vision
devices. In this way, images captured from a
video camera can be preprocessed by a comput-
er to assist in interpretation of an environment.

While focusing on establishing some of the out-
come measures and rehabilitation training that
will be key in bringing substitution vision
devices like the BrainPort and the vOICE into
clinical settings, Dr. Nau is also examining the
effects of brain plasticity in patients who use
artificial vision devices. She hopes to one day
answer such questions as whether one can still
use artificial vision devices after being blind for



Amy Nau, OD

many years. In her own
words, “artificial vision devices
hold the promise to restore
some independence to those
with total vision loss.”
Current funding by the DCEd
and the Louis J. Fox Center for
Vision Restoration, which is a
joint program of UPMC, the
University of Pittsburgh and
the UPMC Eye Center, makes Dr. Nau’s vision
possible.

*For more information on these vision restoration
studies, call 412-864-3241. Or to support Dr.
Nau’s efforts with a gift, contact us at 412-383-
8756 or www.eyeandear.org.*